

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A vertebral arthrodesis device comprising:
at least one pin designed to be positioned along vertebrae that are to be immobilized;~~and~~
at least one screw for anchoring the pin to the vertebrae, each screw[[],]
including: a head that delimits a cavity for receiving the pin;
at least one ring having a substantially-spherical outer surface and an inside diameter allowing sliding engagement on the pin; and[[],]
wherein the head of each screw is shaped so that the cavity that the head delimits may receive the at least one ring with snap-on installation.
2. (Previously Presented) The device according to claim 1, wherein the head of each screw comprises at least one slot opening in the bottom of the cavity, giving the cavity a slight flexibility in a direction perpendicular to that according to which the cavity opens on the outside of the head.
3. (Previously Presented) The device according to claim 2, wherein the head of each screw comprises two lateral slot openings in the bottom of the cavity.
4. (Previously Presented) The device according to claim 3, wherein each lateral slot opening is inclined toward the other slot opening.

5. (Previously Presented) The device according to claim 1, wherein the cavity of each screw is delimited by a wall in the form of a hollow sphere segment having a diameter slightly less than the outer diameter of each ring.

6. (Previously Presented) The device according to claim 5, wherein the cavity of each screw is bordered by two lateral undercuts in the form of a segment of a hollow sphere.

7. (Previously Presented) The device according to claim 1, wherein the head of each screw includes two lateral walls, each lateral wall including at least one threaded hole.

8. (Previously Presented) The device of claim 1, wherein the at least one ring includes a plurality of slots distributed on its periphery.

9. (Previously Presented) The device of claim 8, wherein the slots of the at least one ring extend between the outer surface of the ring and the inside diameter of the ring.

10. (Previously Presented) The device of claim 9, wherein each of the slots of the at least one ring open at one of the longitudinal openings, and each adjacent slot opens at the opposite longitudinal opening.

11. (Currently Amended) The device of claim 1, wherein the head further includes:

at least two lateral threaded holes;

a ~~capelamping ring~~ shaped for positioning on the head by overlapping the at least one ring and having at least two threaded holes configured to align with the at least two lateral threaded holes of the head when the ~~capelamping ring~~ is positioned on the head; and

at least two threaded tightening members for securing the ~~capelamping ring~~ to the head by passing the tightening members through the at least two holes of the ~~capelamping ring~~ and into the threaded holes of the head.

12. (Currently Amended) A vertebral arthrodesis device, comprising:

at least one pin configured to be positioned along two or more vertebrae;

at least one ring having a through hole for receiving the at least one pin, ~~wherein the through hole includes two longitudinal openings disposed on opposite sides of the at least one ring, the at least one ring having~~ an inside diameter configured to allow sliding engagement with the at least one pin, and an outer surface having a substantially spherical shape; ~~and~~

at least ~~one~~ two screw[[s,]] ~~each screw~~ including:

a head that includes a cavity for receiving ~~one of~~ the at least one ring[[s]] in sliding engagement with the pin, wherein the cavity includes an inner surface having

a partially spherical contour configured to engage the outer surface of the at least one ring[[s]]; and

at least one cap having an aperture configured to contact and secure the at least one ring within the cavity, the aperture delimited by inwardly inclined side walls in a cross-section along a first axis of the cap.

13. (Previously Presented) The device according to claim 12, wherein the head of each screw comprises at least one slot opening in the bottom of the cavity, giving the cavity a slight flexibility in a direction perpendicular to that according to which the cavity opens on the outside of the head.

14. (Previously Presented) The device according to claim 13, wherein the head of each screw comprises two lateral slot openings in the bottom of the cavity.

15. (Previously Presented) The device according to claim 14, wherein each lateral slot opening of the head of the screw is inclined towards the other slot opening.

16. (Previously Presented) The device according to claim 12, wherein the cavity of each screw is delimited by a wall in the form of a hollow sphere segment having a diameter slightly less than an outer diameter of each ring.

17. (Previously Presented) The device according to claim 16, wherein the cavity of each screw is bordered by two lateral undercuts in the form of a segment of a hollow sphere.

18. (Previously Presented) The device according to claim 12, wherein the head of each screw includes two lateral walls, each lateral wall including at least one threaded hole.

19. (Previously Presented) The device of claim 12, wherein the at least one ring includes a plurality of slots distributed on its periphery.

20. (Previously Presented) The device of claim 19, wherein the slots of the at least one ring extend between the outer surface of the ring and the inside diameter of the ring.

21. (Previously Presented) The device of claim 20, wherein each of the slots of the at least one ring open at one of the longitudinal openings, and each adjacent slot opens at the opposite longitudinal opening.

22. (Currently Amended) The device of claim 12, wherein the cap includes at least two threaded holes; and

wherein the head further includes:

at least two lateral threaded holes configured to align with the at least two lateral threaded holes of the cap when the cap is positioned on the head; and

~~a clamping ring shaped for positioning on the head by overlapping the at least one ring and having at least two holes configured to align with the at least two lateral threaded holes of the head when the clamping ring is positioned on the head; and~~

at least two threaded tightening members for securing the cap~~clamping ring~~ to the head by passing the tightening members through the at least two holes of the cap~~clamping ring~~ and into the threaded holes of the head.

23. (New) The device of claim 12, wherein the aperture of the cap has a spherical cross-section along a second axis of the cap perpendicular to the first axis.

24. (New) The device of claim 12, wherein the aperture has a conical shape.